PC-6 Porter

WITH CHARACTER OOZING FROM EVERY JOINT, DAVID ASHBY JUST COULDN'T RESIST SEAGULL'S FLYING TRUCK

It's great to see an unusual subject like this from one of the larger ARTF manufacturers.

Although designed for i.c. or electric power, expect to remove plenty of material from the cowl if fitting a glow engine.

Do you ever crave something a bit different from all the Edges, Extras, Yaks and Sukhois that seem to abound at flying sites these days? Something with a bit more character? If so, then the latest release from Seagull Models might be right up your street. Granted it's no all-out aerobat, however the company's Pilatus PC-6 Porter is well made, sensibly-sized and packs more than a little character.

Taking to the sky for the first time more than 50 years ago, the Porter (which very quickly received an engine upgrade and became the Turbo Porter) was designed as a multi-purpose STOL (Short Take Off and Landing) aircraft. Over 550 have since been built and it remains in production to this day. The PC-6 is a very capable aeroplane that can carry large or awkward loads; Mel Gibson's character flew one in the film *Air America* and other examples are often seen servicing remote - and sometimes ridiculously inclined - third world landing strips. All told, you just have to love the Porter's distinctive styling, especially that no-nonsense fin and stabiliser.

Seagull's 63" (1600mm) span version is based on PH-JFL, a stunning photo of which can be seen on the Pilatus website: www.pilatus-aircraft.com. The model is made from laser-cut balsa and ply, designed for electric or i.c. power, and is covered in a very effective printed, aluminium effect Oracover that includes rivet and panel line detail.

Now, it's normally fair to say that electric-powered models don't sound as good as their four-stroke, i.c. powered equivalents, but if you've ever seen and heard a turbo prop aircraft then you'll know that a nice

words » **David Ashby** | photos » **Graham Ashby**

brushless outrunner is audibly closer to the real thing. If that wasn't enough to tempt you, the instruction manual alludes to the fact that a rather large amount of material must be removed from the cowl if an i.c. engine is to be squeezed inside that slim nose. The tapered front end is one of the Porter's notable characteristics, and with a two- or four-stroke silencer adding little to enhance it, I'd imagine that, like me, a fair few will turn to electric power for this particular model.

I fitted standard size sport digital servos all round but analogue units would do just as well.

Don't fit the screw-in aerial supplied, it's far too big. Make something more in keeping.

He may be a bit glossy but on the whole the pilot chappie isn't too bad at all.

The kit itself is good standard ARTF fare that shouldn't present any problems for the intermediate flyer, for whom it's intended. In terms of quality Seagull are up there with the very best of 'em, and this effort does nothing to alter the impression. The instruction manual is neither Premier League nor Sherpa Van trophy but somewhere between the two. It clearly didn't quite keep up with the model's development, as there are one or two (minor) omissions. Similarly, a little more explanatory text wouldn't come amiss in places. Anyway, having built the thing, what follows is a list of the noteworthy observations I made along the way:

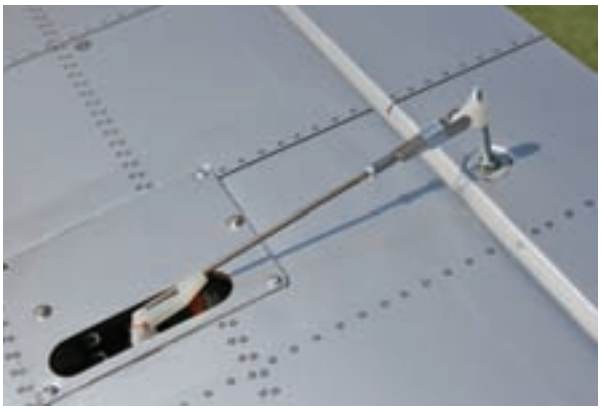
My powertrain delivers comfortable 10-minute flights using 3800mAh 4s Li-Pos.

- Add a little cyano to secure the pre-fitted aileron servo mounting blocks, and drop a screw down into the blocks from the top side of the cover just for extra security.
- The rudder post that passes through the fuselage should really have a tube to guide it towards the underside exit hole. You're literally groping in the dark here, so be patient at the fitting stage.
- The instructions suggest using epoxy to mate the electric motor mount to the fuselage. Mounts like this are usually bolted in place, although I've done the deed as directed and, so far, all's well. Needless to say, roughen the surfaces before mating. The (faintly etched) marker lines on the mount will help with precise location.
- I wedged the adjustable motor firewall in place using hardwood, then carefully tacked it with cyano, and secured it with epoxy to finish.
- The cowl air intake should be opened out to allow cooling air to pass by the ESC and battery. Remember, also, to cut away the centre covering area on the underside battery hatch.
- The kit includes a short metal tube that doesn't seem to have a home. Personally, I think it's an additional wing support that fits in front of the main wing bearer, holes for which are pre-cut.

The whine of the Power 46 outrunner nicely resembles the sound of a turbo-prop.

The struttery is what lets this model down. The tubes have flattened ends which are positive weak points.

Any shock absorbing qualities the undercarriage may have had has been killed by the larger strut. This in turn puts pressure on that flattened end - a poor design.



The aluminium effect Oracover scheme is very convincing.

- The instructions fail to note the rectangular fin T-piece for which, if you look carefully, there's a pre-cut slot.
- The scale-effect screw-in fuselage aerial is far too big, so make something sensible from carbon tube. Have a look at the aforementioned web shot of the full-size aircraft to see what I mean.
- Hardware quality is good, not least the nice metal clevises. Some clever touches are apparent too, notably the removable fuselage servo tray that's secured with a sliding catch. This makes elevator and rudder servo installation simplicity itself. When it came to the servos, I fitted standard sport digitals all round.

Don't you just love the Porter's distinctive outline?

BALANCE

My chosen power system was a Power 46 outrunner coupled to a 60A ESC and 4s 3300 - 3700mAh Li-Po. Although the ESC is rated for 3 - 6s Li-Pos and 4 - 5 digital servos, I prefer not to take any chances and always fit a separate Rx battery (a 2s 1200mAh LiFe pack in this case) and switch harness.

Talking of Rx batteries, Seagull has recognised the effect of the Porter's long nose on the C of G by placing a hatch for the Rx battery towards the rear of the fuselage, just under the tail. My model balanced nose heavy so this was the obvious place for my 2.8oz (80g) LiFe pack, indeed this has proven sufficient to achieve the C of G (measured at the wing tip as per the instructions) without the need for additional ballast.

With a 13 x 6.5" prop, my power system measures close to 600W and 40A, so a little under 90W / lb. This, then, has proved ample to help the model deliver a sensible scale-like performance while still having plenty in reserve for appreciable aerobatics.

The supplied spinner is designed for i.c. so may prove unbalanced when spun by an electric motor. This tends to be due to the backplate flexing, so it may be worth upgrading to a metal-backed version.

For control throw movements the numbers annotated in the manual relate to mm (obvious, really, but clarified here just in case you're in any doubt!). Finally, note that you may need a little expo' dialled in on the elevator.

Note how the extended rudder post drives the steerable tail wheel.

This rear (underside) hatch is for access to the receiver battery.

TRUCKIN'

Take-off is simple enough. It's just a case of adjusting the ground run with rudder and rotating after an appreciable ground speed has been achieved. The Porter's slow speed handling is excellent; I've found the model to be gentle and benign and while the tip will eventually stall, you'll be close to the hover before this happens.

With a distinct and satisfying appearance in the air, low passes are really rewarding; the outrunner convincingly imitates the whine of a turbo prop and there's a nice whistle as air passes over the struts.

The model is capable of performing a gentle sport aerobatic routine, although scale flying is really what does it justice. In this respect it feels much like a faster, more agile Piper Cub, indeed nice slow rolls and loops, gentle passes and wing-overs are the order of the day. Sometimes - and in true Cub fashion - a little rudder helps the tail through turns, but the ailerons are pretty positive and generally the Porter goes where she's put. Loops are easy, although rolls need some help with elevator if you're looking for an axial response. Inverted flight requires just a little forward elevator pressure, yet the model feels safe and steady with the wheels pointing skyward. Meanwhile, spins are easy to enter and surprisingly fast, too.

The model's gentle nature means landings should be uneventful - just balance the throttle and elevator to bring her in. Do it gently, though, for that rigid u/c has absolutely no give whatsoever, so anything other than a real greaser will see the Porter bounce ungracefully back into the air.

ALL-UP

Just a couple of final thoughts then. The first relates to flaps, or rather, the lack of 'em. This is a STOL aeroplane after all, and while their absence does no harm, it would still be nice to have some to play with, just to shorten and slow down take-offs and landings.

Second, the wing and dummy u/c suspension struts are tubes with flattened ends which have quickly started to show signs of wear. I've just replaced my wing struts with stronger tubes and the u/c struts won't be far behind. A factory revision is required here.

Notwithstanding, I like this model. It's well made, strong and with good flying qualities. It looks great, makes a fine canvas on which to add some scale detail and, above all, has terrific character.

DATAFILE

Name:	Pilatus PC-6 Porter
Model type:	ARTF semi-scale
Manufactured by:	Seagull Models
UK distributor:	J. Perkins Distribution Tel. 01622 854300 www.jperkinsdistribution.co.uk
Wingspan:	63" (1600mm)
Fuselage length:	53.7" (1364mm)
Wing area:	5sq. ft. (0.5sq. m)
All-up weight:	6 lb 16oz (3.1kg)
Wing loading:	21.5oz / sq. ft. (6.6kg / sq. m)
Rec'd engine:	.46 - .55 two-stroke .72 - .82 four-stroke
Powertrain used:	Power 46 outrunner, 60A ESC, 4s 3300 - 3800mAh Li-Po, 13 x 6.5" APC-E prop
Functions (servos):	Aileron (2); elevator (1); rudder (1); throttle (via ESC)
Quality:	Poor | Acceptable | Excellent
Assembly:	Easy | Intermediate | Difficult
Flying:	Novice | Improver | Experienced